Granulomatous Dermatoses

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Case 1
Granulomatous Gingivitis

- Most frequently in adulthood
- Most frequently involves interdental papillae and marginal gingiva
- Often pain and sensitivity
- Often persistent despite therapy
- Must rule out various causes of granulomatous inflammation

Granulomatous Gingivitis

Possible causes:

- Foreign materials
- Infectious
- Orofacial granulomatosis
- Sarcoidosis
- Crohn’s disease
- Wegener’s granulomatosis


Gelato
Prophy Paste
Non-Splatter Formula
1.23% Fluoride Ion
Net Wt: 400g (14.1 oz)

Differential--Orofacial Granulomatosis

- Granuloma mucosal/skin without systemic disease--Lips
- AKA Melkersson-Rosenthal syndrome and Miescher cheilitis (granulomatous cheilitis)
- ?Abnormal (genetic) immune response or allergy

Case 2
Granulomatous Lichen Planopilaris

- Rare
- ? If there is exogenous material involved, similar to granulomatous gingivitis

Frontal fibrosing variant of lichen planopilaris

- Incidence increased markedly in 1990s
- Most perimenopausal women but also younger and in men
- Targets smaller hairs of body (eyebrow, body hair)

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Frontal fibrosing alopecia: possible association with leave-on facial skin care products and sunscreens; a questionnaire study.

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Author information

Abstract

BACKGROUND: Since its first description in 1994, frontal fibrosing alopecia (FFA) has become increasingly common, suggesting that environmental factors are involved in the aetiology.

OBJECTIVES: To identify possible causative environmental factors in FFA.

METHODS: A questionnaire enquiring about exposure to a wide range of lifestyle, social and medical factors was completed by 105 women with FFA and 100 age- and sex-matched control subjects. A subcohort of women with FFA was patch tested to an extended British standard series of allergens.

RESULTS: The use of sunscreens was significantly greater in the FFA group compared with controls. Subjects with FFA also showed a trend towards more frequent use of facial moisturizers and foundations but, compared with controls, the difference in frequencies just failed to reach statistical significance. The frequency of hair shampooing, oral contraceptive use, hair colouring and facial hair removal were significantly lower in the FFA group than in controls. Thyroid disease was more common in subjects with FFA than controls and there was a high frequency of positive patch tests in women with FFA, mainly to fragrances.

CONCLUSIONS: Our findings suggest an association between FFA and the use of facial skin care products. The high frequency of sunscreen use in patients with FFA, and the fact that many facial skin care products now contain sunscreens, raises the possibility of a causative role for sunscreen chemicals. The high frequency of positive patch tests in women with FFA and the association with thyroid disease may indicate a predisposition to immune-mediated disease.

Frontal fibrosing alopecia in men: an association with facial moisturizers and sunscreens

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Dear Editor, Frontal fibrosing alopecia (FFA) was first described by Kossard in 1994 in six postmenopausal women.[1] FFA remained rare during the 1990s, but in the last 10–15 years it has become increasingly common, a phenomenon observed worldwide. The recent onset and apparently rising incidence of FFA suggest involvement of environmental factors in the aetiology. We previously reported a questionnaire study in women with FFA that asked about a wide range of medical, social and environmental exposures. The results suggested an association between FFA and leave-on facial products, including moisturizers and sunscreens.[2] However, although the regular use of moisturizers was greater in women with FFA, these products are used by most women and we were unable to show a significant difference in their use between women with FFA and similarly aged controls. The use of primary sunscreens was significantly greater among women with FFA than in controls, but we were not able to assess whether patients were also exposed to sunscreens from other sources.

We have therefore repeated our questionnaire study in men with FFA, as we anticipated that their use of leave-on facial skincare products would be lower than in women.

As FFA is rare in men, patients were recruited from across the U.K. and one case was recruited from Belgium. In all cases the diagnosis was made by a clinician with special expertise in hair disease, and it was supported by histology in most cases. The clinical diagnosis was based on scarring alopecia affecting the frontal hairline causing recession of the hairline. Additional features included loss of eyebrows, follicular erythema of the frontal hairline and loss of sideburn and beard hair. Male controls aged 35–80 years were recruited from three sites (Sheffield, Salford and Glasgow). The patients completed a questionnaire similar to that used in our female study, but inviting more detailed information on the use of facial skincare and hair care products. Male patients with FFA were asked about the timing and distribution of hair loss, but otherwise the questionnaires completed by both groups were identical.

Seventeen men with FFA and 73 controls were recruited. The mean age of onset of hair loss in the patients with FFA was 54·5 years (range 35–77). All had loss of hair from the frontal hairline, and 16 (94%) had lost eyebrows. Twelve men (71%) reported loss of hair from the beard and 13 (76%) reported loss of hair from the limbs. All men with FFA reported using facial moisturizers, compared with 40% in the control group. Facial moisturizers were used at least twice a week by 94% of patients with FFA, but by only 32% of controls ($P < 0·001$) (Table 1). Sixteen patients reported using moisturizers for a period consistent with their use prior to the onset of FFA. The use of primary sunscreens by men with FFA was significantly more common than by controls. Overall 35% of men with FFA reported using a sunscreen at least twice a week all year round, compared with 4% of controls ($P = 0·0012$).

When moisturizers containing sunscreen chemicals were included in the analysis, at least 71% of men with FFA applied a product containing a sunscreen at least twice a week all year

Table 1 Reported use of skincare and hair care products by patients with frontal fibrosing alopecia (FFA) and controls

	Patients with FFA	Controls	P-value
Number of patients	17	73	
Age (years), mean (range)	63·1 (42–80)	59·1 (37–79)	
Age at onset of hair loss (years), mean (range)	54·5 (35–77)		
Facial moisturizer[a]	16 (94)	23 (32)	< 0·001
Primary sunscreen[b]	6 (35)	3 (4)	0·0012
Sunscreen[b]	12 (71)	8 (11)	< 0·001
Facial cleanser[a]	4 (24)	5 (7)	0·066
Facial scrub[a]	0	0	
Facial mask[a]	0	0	
Aftershave[a]	7 (41)	28 (39)	1·00
Shampoo[a]	13 (76)	62 (85)	0·27
Conditioner[a]	4 (24)	13 (18)	0·73
Hair spray[a]	1 (6)	2 (3)	0·48
Hair mousse[a]	0	0	
Hair gel[a]	2 (12)	10 (14)	1·00
Hair dye[c]	2 (12)	3 (4)	0·26

Values are n (%) unless stated otherwise. [a]Twice a week or more frequently. [b]Twice a week or more frequently all year round. [c]At least once a year. Sunscreen includes exposure to sunscreen chemicals in primary sunscreens and moisturizers. Analyses were performed after excluding subjects who failed to answer the question. Frequencies in the FFA and control groups were compared using Fisher's exact test.

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Sunscreen in FFA

- Oxybenzone and Avobenzone introduced late 1980s
- Zinc oxide and titanium dioxide
  - Oral lichen planus associated with dental metal

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Alopécie frontale fibrosante post ménopausique : une réaction lichénoïde aux nanoparticules de dioxyde de titane présentes dans les follicules pileux?

Charlotte Gary[1], Florence Brunet-Possenti[1], Eduardo Marinho[2], Lydia Deschamps[2], Hester Colboc[3], Dominique Bazin[4], Vincent Descamps[1]

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[4]Synchrotron SOLEIL, Gif-sur-Yvette

INTRODUCTION

L'alopécie frontale fibrosante (AFF) post ménopausique est une pathologie émergente dont l'incidence augmente dans l'ensemble des pays. Son origine reste inconnue. Nous rapportons la présence de dioxyde de titane dans les cheveux d'une patiente atteinte d'AFF.

OBSERVATION

Une patiente âgée de 79 ans était suivie en consultation depuis 2010 pour une alopécie progressive évoluant au moins depuis 12 ans soit depuis l'âge de 69 ans prédominant au niveau fronto-temporo-pariétal avec recul progressif de la ligne d'implantation des cheveux. Elle s'associait à une alopécie des sourcils. A l'examen la peau du front était scléreuse. Les cheveux présentaient à leur ostium folliculaire un léger érythème avec hyperkératose. Le tableau clinique était typique d'une AFF (Fig. 1). Une biopsie cutanée était réalisée confirmant le diagnostic d'alopécie cicatricielle lymphocytaire. Cette patient avait par ailleurs une forte héliodermie témoignant d'une exposition solaire importante tout au long de sa vie.

Figure 1

LAURÉAT PRIX BIODERMA

MÉTHODES ET RÉSULTATS

Une recherche de nanoparticules a été réalisée sur des follicules pileux extraits en zone atteinte par microscopie électronique à balayage par effet de champs combinée à une spectroscopie à dispersion énergétique.
Un jeu de clichés de microscopie électronique à balayage sur un microscope de dernière génération a été collecté sur un ensemble de cheveux mettant en évidence des dépôts anormaux de nanoparticules (Fig 2A, 2B).
En complément, les expériences de fluorescence X induites par des électrons sur le microscope électronique à balayage montraient distinctement un signal attribuable aux atomes de titane (Fig. 2C, 2D).

Cette observation met ainsi en évidence sans ambiguïté la présence de nanoparticules de dioxyde de titane au niveau des follicules pileux.

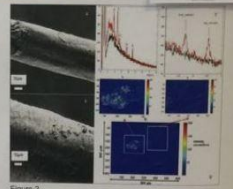

Figure 2

DISCUSSION

L'AFF est considérée comme une forme particulière de lichen folliculaire avec histologiquement un infiltrat lymphocytaire périfolliculaire. Des études épidémiologiques récentes associent la présence de cette alopécie à l'utilisation de cosmétiques en particulier de crème solaire.
En reprenant l'interrogatoire de cette patiente signalait l'utilisation quotidienne depuis 15 ans d'écrans solaires contenant du dioxyde de titane.
Du fait des propriétés anti-UV, la présence de nanoparticules (dioxyde de titane et oxyde de zinc) s'est très largement répandue au cours de ces dernières années dans les produits cosmétiques, et l'impact dermatologique à long terme de ces particules n'est pas encore bien connu chez l'homme.
L'hypothèse formulée est que la présence de dioxyde de titane au sein du follicule pileux soit responsable d'une réaction lichénoïde. Des réactions lichénoïdes sont connues avec d'autres métaux tels que le Nickel.
Des explorations complémentaires sont en cours chez cette patiente (tests épicutanés et tests in vitro de prolifération lymphocytaire et ELISPOT en présence de titane).

CONCLUSION

Nous présentons la première observation de présence de nanoparticules dans les follicules pileux d'une patiente atteinte d'AFF post-ménopausique.

Alopécie frontale fibrosante post ménopausique : une réaction lichénoïde aux nanoparticules de dioxyde de titane présentes dans les follicules pileux?

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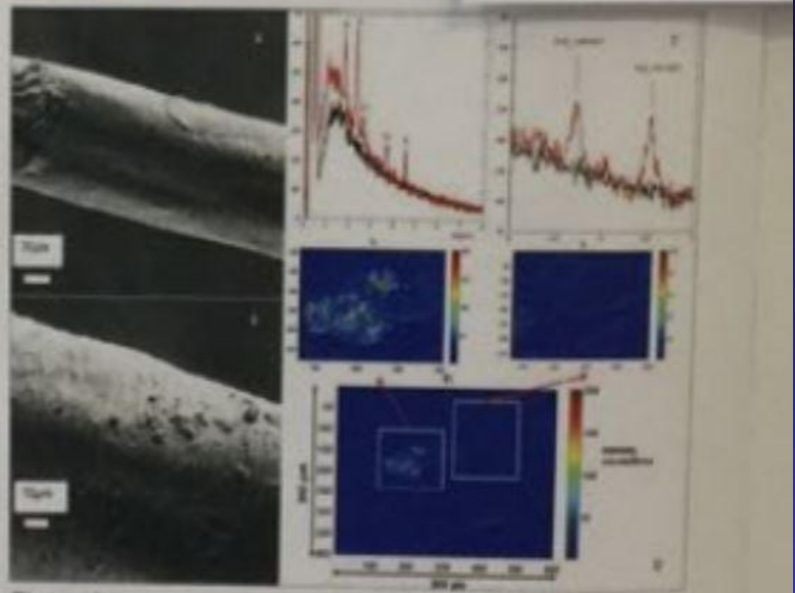
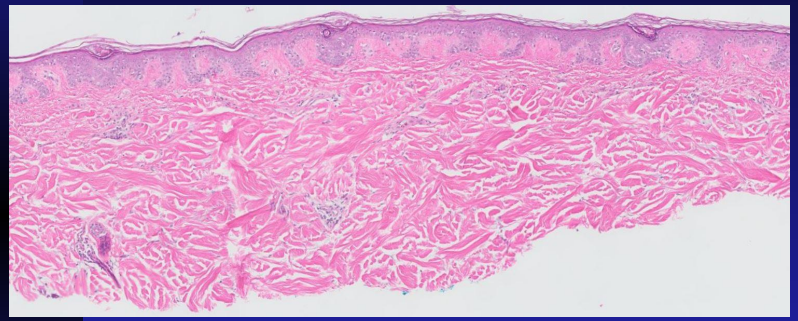


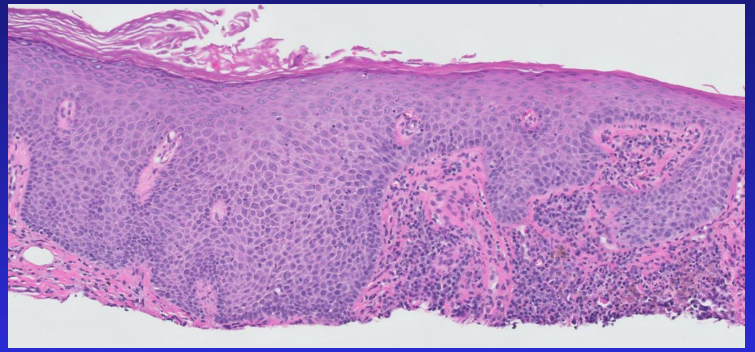
Figure 2

Differential—Folliculitis Decalvans

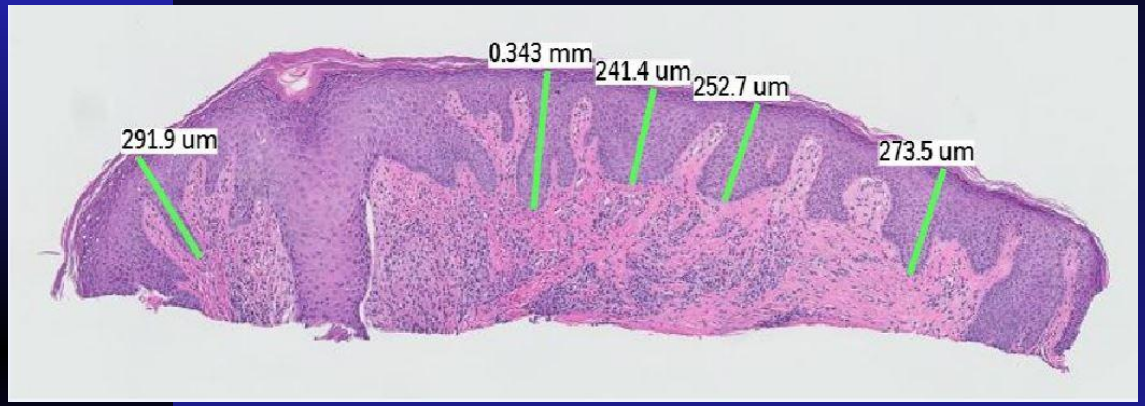
- More interstitial
- Neutrophils usually but not always present
- Epidermal thickness useful
  - Acanthotic in folliculitis decalvans
  - Normal in lichen planopilaris

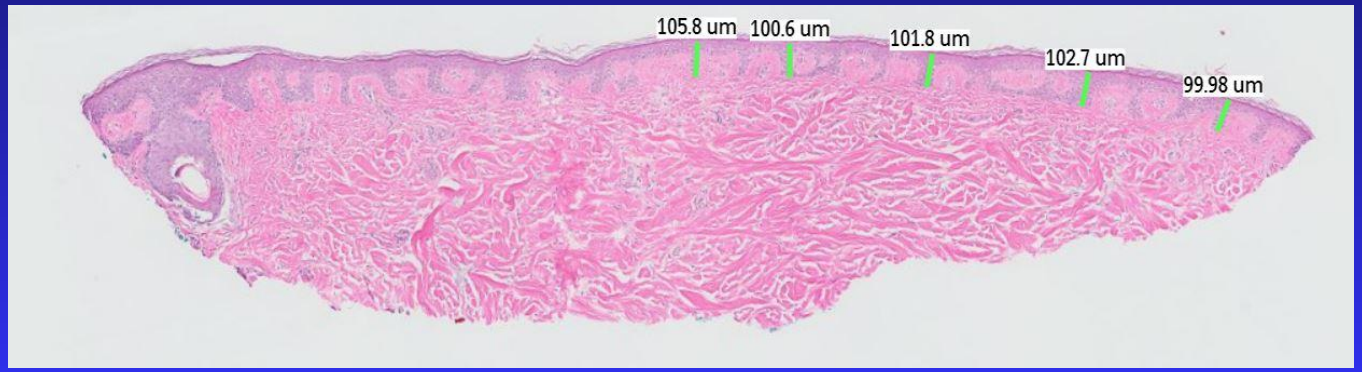
Folliculitis decalvans or LPP?





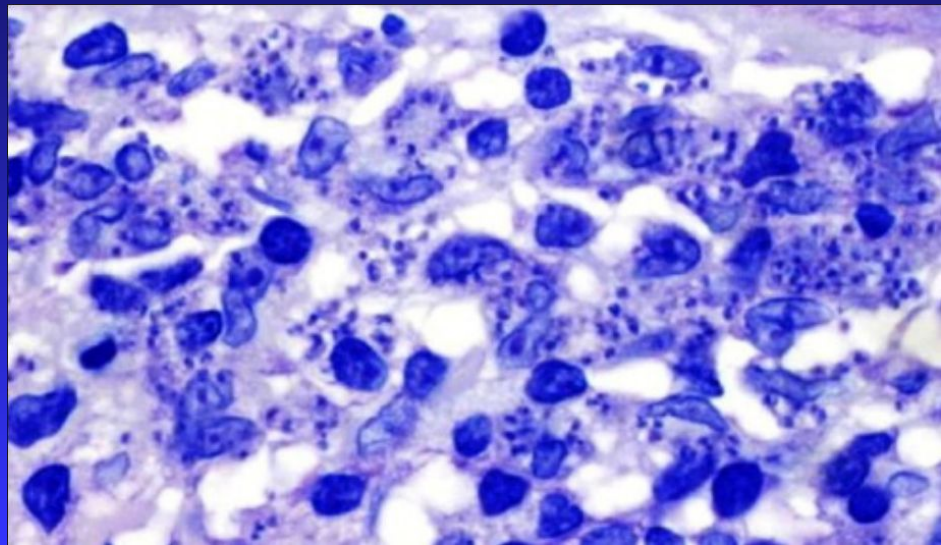
Folliculitis decalvans or LPP?





Case 3
Leishmaniasis

- Can be seen by a variety of stains but H&E usually sufficient



CD1a for Leishmaniasis

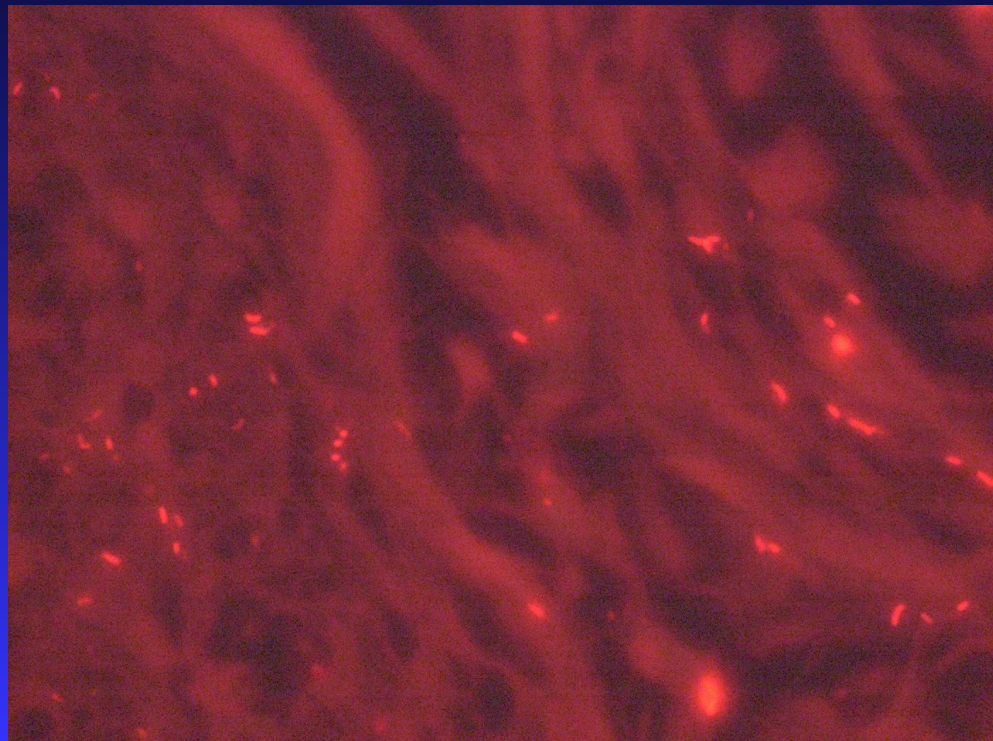
- Not all clones of CD1a recognize the parasite
  - MTB1 is best (O10 not)
- Stainins is membrane plus kinetoplast—helps with false positive
- Negative in New World species

Other Antibodies for Leishmaniasis

- Anti-Leishmania G2D10
- Not commercially available
  - Need experience with these antibodies
- All IHC may be problematic with false positive (background) staining

Kenner JR *et al.* Immunohistochemistry to identify leishmania parasites in fixed tissue. J Cutan Pathol 26:130-6, 1999.

Case 4
Leprosy—Rhodamine stain



Thanks!

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